



*NOAA's mission is to describe  
and predict changes in the  
Earth's environment, and  
conserve and wisely manage  
the Nation's coastal and marine  
resources.*



*The mission of NOAA's Environmental Compliance and Safety Division is to ensure that the agency, its employees, and its affiliates conduct their activities in an environmentally responsible and safety-conscious manner.*

*The guiding vision of NOAA's Environmental Compliance and Safety Division is the total integration of environmental and safety and health awareness into the culture of the organization, so that such awareness becomes an inherent part of all the operations and activities of NOAA.*



Office of NOAA  
Corp Operations



National Weather  
Service



Oceanic and  
Atmospheric Research



National Ocean  
Service



National Environmental  
Satellite, Data, and  
Information Service



National Marine  
Fisheries Service



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# MISSION STATEMENT

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**The mission of the National Oceanic and Atmospheric Administration's (NOAA) Environmental Compliance and Safety (ECS) Division is to ensure that the agency, its employees, and its affiliates conduct their activities in an environmentally responsible and safety-conscious manner that:**

- C Complies with all applicable laws, regulations, and executive orders**
  - C Provides a safe working environment**
  - C Promotes stewardship of the community and natural resources**
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# VISION STATEMENT

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**The guiding vision of NOAA's ECS Division is the total integration of environmental and safety awareness into the culture of the organization, so that such awareness becomes an inherent part of all the operations and activities of NOAA.**

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# GOALS

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**The goals of NOAA's ECS Division are:**

**Goal 1: Restore Properties**

**Goal 2: Achieve Full Compliance and Manage Risk**

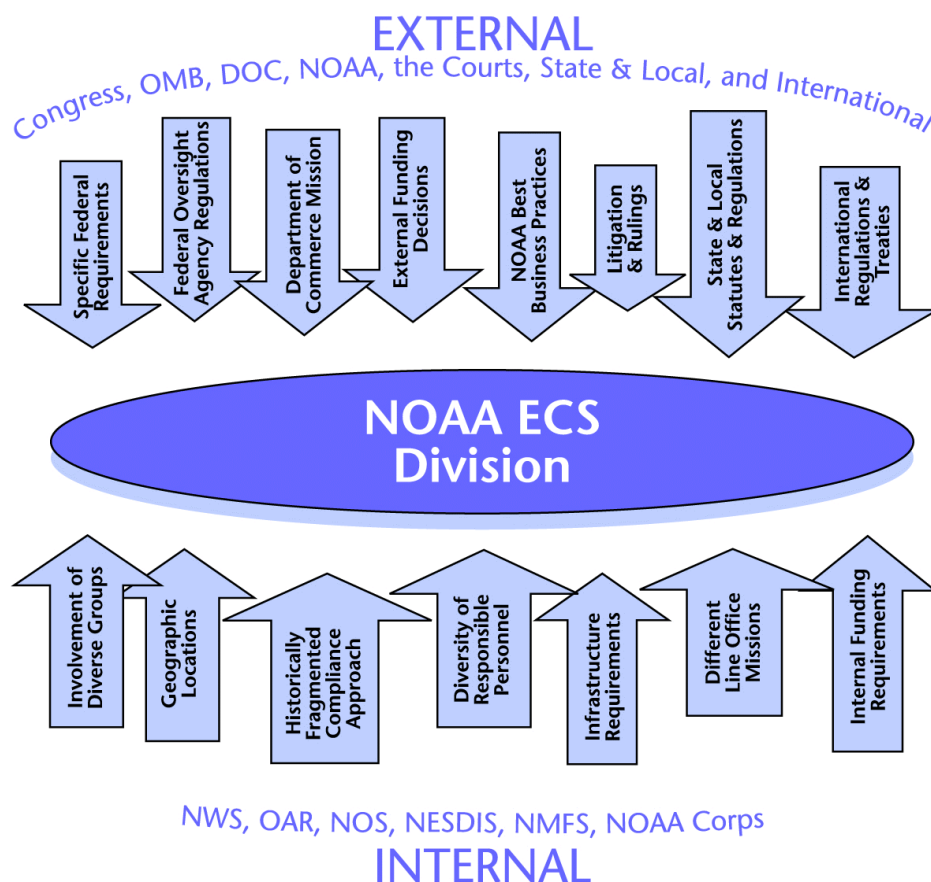
**Goal 3: Sustain Compliance**

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# THE CHALLENGE

In an increasingly complex system of environmental and safety & health requirements, federal departments or agencies face a diversity of challenges to implementing programs that comply with all of the requirements set forth under such a complex system. These challenges can be characterized by external and internal influences. External challenges are usually those over which an agency has no control; they are requirements defined by those parties outside of the agency. Internal challenges are usually those over which an agency has some control; they are requirements, both mandated in department or agency regulations and understood in business practices, that stem from a department or agency's mission and organization. The external and internal challenges facing the NOAA ECS Division are presented below and in Figure 1.

Figure 1: Challenges to the NOAA ECS Division



## EXTERNAL CHALLENGES

Environmental protection and occupational safety and health involve a complex system of international, federal, state, and local requirements. These requirements include statutes; regulations; permit conditions; court rulings; and, in certain situations, best or standard business and work practices. For example, the NOAA user of any toxic chemical must have knowledge of two or three environmental and safety regulatory programs. The handling of such a chemical at a NOAA facility may require knowledge of requirements under several statutes, including, but not limited to, the Toxic Substances Control Act (TSCA) and the Occupational Safety and Health Act (OSHA); may be subject to transportation requirements imposed by the U.S. Department of Transportation (DOT); and may fall under the jurisdiction of other regulatory agencies, as well.

External challenges to the NOAA ECS Division include specific environmental and safety and health legal requirements and policies that establish requirements that must be met while supporting the missions and goals of NOAA. For example, provisions of the Clean Water Act [CWA]; Executive Order 12088, Federal Compliance with Pollution Control Standards; OSHA; and Executive Order 12196, Occupational Safety and Health Programs for Federal Employees, must all be met. Further, the Government Performance and Results Act (GPRA) and the Chief Financial Officers (CFO) Act make compliance complex and challenging, and affect the ways in which NOAA's ECS Division implement environmental and safety and health programs. The existing legal and regulatory system places a tremendous burden on each manager in the workplace, at all levels of an organization, including individual facilities, line and staff offices, the regions, and headquarters, because no one person is cognizant of all applicable requirements.

The organizations with oversight responsibilities for NOAA also create external challenges that the ECS Division must overcome. Department of Commerce (DOC) regulations and organization influence NOAA operations, and therefore, the implementation of environmental and safety and health programs within NOAA. Funding decisions from DOC, the Office of Management and Budget, and Congress also affect such program implementation at NOAA.

Such external challenges sometimes include requirements that must be met simultaneously; for that reason, efforts to meet equally important requirements compete for limited funds, a circumstance that often leads to management inefficiencies and skewed priorities. This strategic plan addresses such challenges while attempting to define the scope of NOAA's ECS Division.

## INTERNAL CHALLENGES

In addition to the government-wide requirements set forth in environmental and safety and health statutes and oversight agency regulations, individual agencies also have specific challenges due to their own regulations and organization. The NOAA ECS Division mission involves all levels of the organization, from senior executives to laboratory technicians, meteorologists, principal investigators, scientific and technical support staff, hazardous waste handlers, and the rest of its 12,000 employees. Employees in each of NOAA's line and staff offices, major science centers, administrative support centers, and

facilities manage the day-to-day compliance requirements for its almost 2,000 facilities, including support facilities for ships and aircraft, research laboratories, weather forecasting offices, office buildings, and unstaffed remote data collecting stations. The diversity of NOAA's mission, employees, types of facilities, and geographic locations adds complexity to achieving and sustaining compliance.

Responsible environmental and safety and health personnel range from full-time professionals such as Regional Environmental Compliance Officers (RECO), Safety and Environmental Compliance Officers (SECO) and Regional Safety Managers (RSMS), to those for whom compliance activities are a secondary responsibility. The employees with these ad-hoc responsibilities are charged with ensuring that NOAA's facilities are operated in a manner that complies with all applicable federal, state, and local requirements and that NOAA's personnel are trained and equipped to manage hazards in the workplace. The strategic plan for NOAA's ECS Division integrates environmental and safety and health management systems and provides tools that allow those responsible for compliance to use compliance documents developed by others. Such individuals will be able to draw on resources and guidance from throughout NOAA that will provide the format and content of compliance documents pertinent to their immediate needs.

Implementation of NOAA ECS Division initiatives involves several organizational structures at both the DOC and NOAA levels. Important guidance elements of NOAA's ECS Division are divided among several offices at DOC, including the Office of Human Resources Management, the Office of Administrative Services, and the Office of Safety and Building Management. NOAA implementation elements also have been divided among several offices, including the regional Administrative Support Centers (ASC), the Facilities and Logistics Division, and the line offices.



# BENEFITS

## SUPPORT OF NATIONAL GOALS

NOAA's ECS Division supports the goals stated in the nation's environmental and safety and health statutes (see Table 1.) NOAA's ECS Division goals are aligned with the stated national goals and are authorized and mandated by provisions of environmental and safety and health statutes or the regulations that implement those statutes. The combined efforts of all federal agencies play a major role in achieving the national environmental and safety and health goals. The cross-cutting, multi-agency aspects of the national goals under environmental statutes are coordinated through the EPA and through activities of the multi-agency Civilian Federal Agency Environmental Task Force. Cross-cutting and multi-agency aspects of regulations under OSHA are coordinated through the occupational safety and health committees and field federal safety and health councils. NOAA must do its part and accomplish its mission in a manner that is consistent with the national environmental and safety and health goals.

## BENEFITS TO THE NATION

The benefits to the nation of an effective NOAA ECS Division can be stated in terms of risks. An effective environmental and safety and health compliance program can reduce human health and environment risks. An effective program can reduce financial risks — that is, financial liabilities — associated with harm to people and damage to property and with cleaning up pollutants and contaminants. An effective program can reduce legal civil and criminal risks — that is, legal liabilities — associated with noncompliance and violations. Therefore, an effective NOAA ECS Division protects the employees of NOAA, the public, and the environment; saves taxpayers money; and diminishes exposure of NOAA and its workers to costly legal consequences.

**TABLE 1**  
**EXAMPLES OF ENVIRONMENTAL AND SAFETY AND HEALTH**  
**STATUTES AND MANDATES, AND THEIR NATIONAL GOALS**

STATUTE OR MANDATE	NATIONAL GOAL(S)
<b>National Environmental Policy Act (NEPA)</b> (42 United States Code [U.S.C.] 4341 <i>et seq.</i> )	"(T)o promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate health and welfare ..."
<b>Clean Air Act (CAA)</b> (42 U.S.C. 7401 <i>et seq.</i> )	"(T)o protect and enhance the quality of the Nation's air resources so as to promote public health and welfare ..."
<b>Clean Water Act (CWA)</b> (33 U.S.C. 1251 <i>et seq.</i> )	"(To) restore and maintain the chemical, physical, and biological integrity of the Nation's waters."
<b>Resource Conservation and Recovery Act (RCRA)</b> (42 U.S.C. 6901 <i>et seq.</i> )	<p>"(T)o reduce the amount of waste and unsalvageable materials and to provide for proper and economical solid waste disposal practices."</p> <p>"(T)o promote the protection of health and the environment and to conserve valuable material and energy resources ...."</p> <p>"(T)o eliminate the generation of hazardous waste "so as to minimize the present and future threat to human health and the environment."</p>
<b>Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)</b> (42 U.S.C. 9601 <i>et seq.</i> )	"(T)o remove [hazardous substances released into the environment which pose an imminent and substantial threat or danger to public health or welfare ... and provide for remedial action, ... or take any other response measure ... necessary to protect the public health or welfare or the environment ..."
<b>Toxic Substance Control Act (TSCA)</b> (15 U.S.C. 2601 <i>et seq.</i> )	"(T)o regulate chemical substance and mixtures which present an unreasonable risk or injury to health or the environment, and to take action with respect to chemical substances and mixtures which are imminent hazards ..."

STATUTE OR MANDATE	NATIONAL GOAL(S)
<b>Occupational Safety and Health Act (OSHA)</b> (29 U.S.C. 651 <i>et seq.</i> )	<p>"(T)o assure so far as possible every ... [worker] in the nation safe and healthful working conditions and to preserve our human resources." This includes protecting laboratory workers from hazardous chemicals (see Occupational Exposure to Hazardous Chemicals in Laboratories — Laboratory Standards — [29 Code of Federal Regulations (CFR) 1910.1460]).</p> <p>"(E)ach Federal agency [shall] ... establish and maintain an effective and comprehensive occupational safety and health program..."</p>
<b>Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters</b> (29 CFR 1960 <i>et seq.</i> )	<p>"(T)o assure safe and healthful working conditions for Federal employees."</p>
<b>General Duty Clause (OSHA of 1970)</b> [29 USC 654 5(a) and (b)]	<p>"(A)ssurance of workplace free from recognized hazards that are causing or likely to cause serious physical harm."</p>
<b>Executive Order 12088</b> Federal Compliance with Pollution Control Standards	<p>"(T)he head of each Executive agency is responsible for ensuring that all necessary actions are taken for the prevention, control, and abatement of environmental pollution with respect to Federal facilities and activities under the control of the agency."</p>
<b>Executive Order 12196</b> Occupational Safety and Health Programs for Federal Employees	<p>"(T)he head of each agency shall: (a) Furnish to employees places and conditions of employment that are free from recognized hazards that are causing or are likely to cause death or serious physical harm, (b) Operate an occupational safety and health program in accordance with the requirements of this order and basic program elements promulgated by the Secretary..."</p>
<b>Executive Order 13148</b> Greening the Government Through Leadership in Environmental Management	<p>"(T)he head of each Federal agency is responsible for ensuring that all necessary actions are taken to integrate environmental accountability into agency day-to-day decision making and long-term planning processes, across all agency missions, activities, and functions."</p>

## BENEFITS TO NOAA

The three goals of the NOAA ECS Division seek to form a unified partnership with line and staff offices to implement environmental and safety and health projects and activities. Each line and staff office of NOAA is expected to use the strategic plan to align and coordinate the development of plans, set goals and objectives, and conduct day-to-day activities that will help NOAA to address the internal and external challenges described in earlier sections of this plan. The approach of the strategic plan is based on a partnership between line and staff offices. The partnership will:

- ℄ Facilitate better coordination of resources
- ℄ Eliminate duplication of efforts, reduce costs, and create synergy
- ℄ Increase the efficiency and consistency of environmental and safety and health efforts



# SUMMARY OF OBJECTIVES

Each strategic goal is supported by a set of objectives. Each objective provides further focus for attaining the goals and vision of NOAA's ECS Division and provides guidance for coordinating and aligning activities in a manner that is consistent with the division's mission.

## **GOAL 1: RESTORE PROPERTIES**

### **OBJECTIVE 1.1**

#### **IDENTIFY THE SCOPE OF CONTAMINATION**

Complete identification and characterization of contaminated properties using Clean Up and Restore the Environment (CARE) assessments.

### **OBJECTIVE 1.2**

#### **RESTORE THE ENVIRONMENT**

Restore properties to minimize risks to human health and the environment.

## **GOAL 2: ACHIEVE FULL COMPLIANCE AND MANAGE RISK**

### **OBJECTIVE 2.1**

#### **ENSURE ENVIRONMENTAL AND SAFETY AND HEALTH COMPLIANCE**

Conduct periodic, comprehensive environmental and safety and health inspections and assessments of all high- and medium-risk facilities. Initiate compliance assistance activities based on the results of those assessments. Use the data to help measure the status and progress of the ECS Division (see Objective 3.5).

### **OBJECTIVE 2.2**

#### **IDENTIFY THE SCOPE OF, CORRECT, AND PREVENT POLLUTION PROBLEMS**

Identify chemicals and current compliance issues through NOAA's Chemical Information Management System (CIMS) and application of the NECSAS environmental compliance protocols. Correct current compliance issues on the basis of their priority, as determined through application of the factors in determining priority established by EPA. Apply pollution prevention approaches identified in facility pollution prevention plans to reduce the quantity and toxicity of wastes generated and pollutants released by NOAA's facilities.

### **OBJECTIVE 2.3**

#### **MINIMIZE ENVIRONMENTAL AND SAFETY AND HEALTH COMPLIANCE AND ACTUARIAL RISK AND LIABILITY**

Identify and assess hazards according to formal risk management processes through the use of risk-based tools and procedures; eliminate or control hazards through the use of formal hazard abatement procedures and plans; and ensure that hazard prevention and control procedures are in place. Conduct analyses of job hazards for all high-risk research projects. Develop and maintain emergency preparedness plans. To reduce risk and liability (including reductions in the costs of workers' compensation and in the occupational accident rate), institute root cause analysis of compliance deficiencies and address causal factors.

### **OBJECTIVE 2.4**

#### **IMPLEMENT SUSTAINABLE AND RISK-FREE DESIGN METHODOLOGIES**

Reduce negative effects on the environment and reduce potential effects on the occupants of a facility by incorporating sustainable design practices and risk-management techniques in the construction of new facilities and major modifications of existing facilities.

## **GOAL 3: SUSTAIN COMPLIANCE**

### **OBJECTIVE 3.1**

#### **CREATE AND SUSTAIN MANAGEMENT COMMITMENT**

NOAA and its line and staff offices and facilities make a written, top-management commitment to improve environmental and safety and health performance by establishing policies that emphasize pollution prevention, risk management, and the need to ensure compliance with applicable requirements.

### **OBJECTIVE 3.2**

#### **SUSTAIN COMPLIANCE ASSURANCE**

NOAA and its line and staff offices and facilities implement proactive programs that aggressively identify and address potential compliance problems, use innovative approaches to correct deficiencies, and improve environmental and safety and health performance.

### **OBJECTIVE 3.3**

#### **IMPLEMENT ENABLING SYSTEMS**

NOAA and its line and staff offices efficiently develop and implement information systems and training to enable and empower personnel to perform their functions in a manner that is consistent with regulatory requirements and with the policies and missions of NOAA, its offices, and its facilities. Such an effort will help change the corporate culture by increasing awareness among employees of NOAA's environmental and safety and health programs, as well as their commitment to and involvement in those programs.

### **OBJECTIVE 3.4**

#### **SUSTAIN PERFORMANCE LEVELS AND ACCOUNTABILITY**

NOAA and its line and staff offices and facilities develop and implement a process for linking evaluation of employee performance to environmental and safety and health compliance at all levels of the organization.

**OBJECTIVE 3.5****IMPLEMENT TECHNIQUES FOR PROGRAM MEASUREMENT AND IMPROVEMENT INITIATIVES**

NOAA and its line and staff offices and facilities conduct assessments of the ECS Division to evaluate progress in meeting its environmental and safety and health goals. The assessments will measure compliance with federal, state, and other applicable regulations, codes, and best professional and business practices. The results will be compared with other federal agencies and continue to improve environmental and safety and health performance.

**OBJECTIVE 3.6****INITIATE PARTNERSHIPS WITH WORLD-CLASS ORGANIZATIONS**

NOAA and its line and staff offices and facilities initiate and develop partnerships with public or private organizations with world class environmental and safety and health programs for benchmarking and mentoring activities.

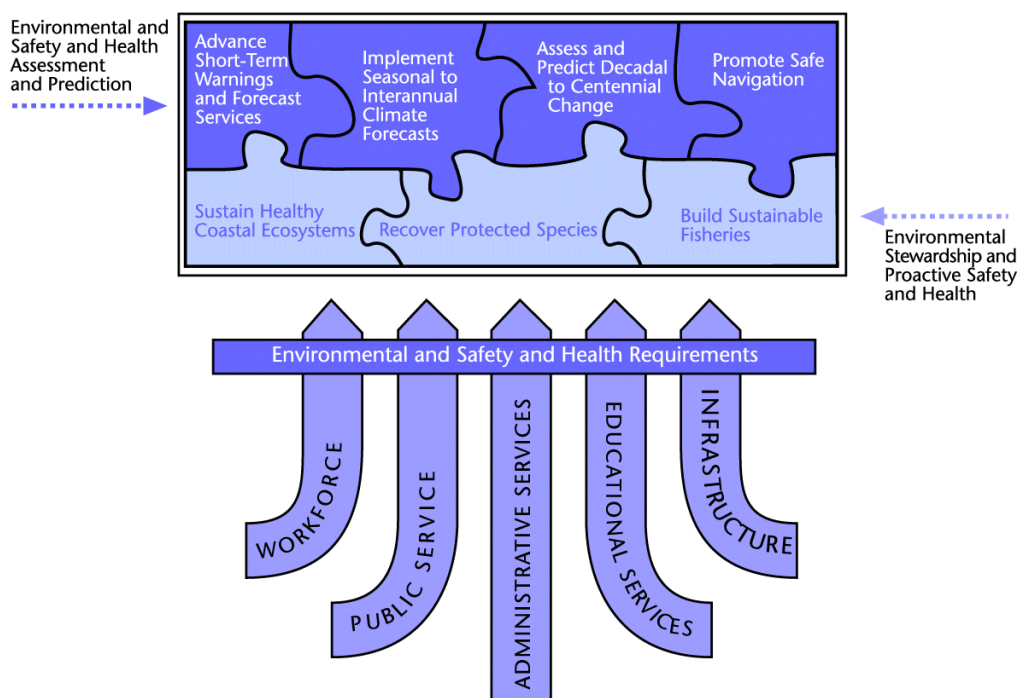


# STRATEGY

## RELATIONSHIP TO THE MISSION OF NOAA

The achievement of NOAA's missions and strategic goals depends on NOAA's "supporting infrastructure" (see Figure 2). NOAA's supporting infrastructure consists of its workforce, facilities, administrative services, and public and educational services. All those elements are essential to the accomplishment of NOAA's strategic goals. NOAA's ECS Division is an administrative service of NOAA that supports achievement of the seven strategic goals within NOAA through improved facility and operational management and a well-networked and knowledgeable workforce. Facilities operated in a compliant manner are operated efficiently and are neither potential burdens nor long-term liabilities to the agency or to the public. Activities conducted in a safe and healthful manner at the workplace do not pose risks to workers or stakeholders, nor do they impose burdens or long-term liabilities (such as liabilities for payment of workers compensation claims) on the agency. Therefore, when facilities provide safe and healthful working conditions, more resources can flow to NOAA programs related to its missions and strategic goals.

**Figure 2: Relationship of NOAA's Seven Strategic Goals to the ECS Division Strategic Plan**



NOAA's facilities and workforce are valuable national resources that are vital to the accomplishment of NOAA's missions and goals. To ensure these resources are used in a manner most likely to accomplish those missions and goals, it is necessary to sustain compliance with environmental and safety and health requirements. Environmental and safety and health compliance issues at facilities and workplaces involve past, present, and future activities. The three goals established under the strategic plan are aligned with those three time perspectives. Table 2 presents facility and workplace issues related to those perspectives.

<b>TABLE 2</b> <b>GOALS AND TIME PERSPECTIVES OF FACILITY AND WORKPLACE ENVIRONMENTAL AND SAFETY AND HEALTH COMPLIANCE ISSUES</b>		
<b>GOAL 1:</b> <b>RESTORE</b> <b>PROPERTIES</b> <b>(Past)</b>	<b>GOAL 2:</b> <b>ACHIEVE FULL</b> <b>COMPLIANCE AND</b> <b>MANAGE RISK</b> <b>(Present)</b>	<b>GOAL 3:</b> <b>SUSTAIN</b> <b>COMPLIANCE</b> <b>(Future)</b>
<ul style="list-style-type: none"> <li>C Regulatory Liabilities</li> <li>C Historical Neglect</li> <li>C Property Acquisitions</li> <li>C Payment of Workers' Compensation Claims</li> <li>C Sick Leave (Indoor Air Quality Problems)</li> </ul>	<ul style="list-style-type: none"> <li>C Operations and Maintenance</li> <li>C Existing Legal and Regulatory Requirements</li> <li>C Emergencies</li> <li>C Activities and Working Conditions</li> <li>C Risk Communication and Training</li> </ul>	<ul style="list-style-type: none"> <li>C Planning</li> <li>C Growth and Downsizing</li> <li>C New Regulations</li> </ul>

**Goal 1, Restore Properties:** Addresses historical problems that first must be characterized properly and then resolved on a worst-first basis.

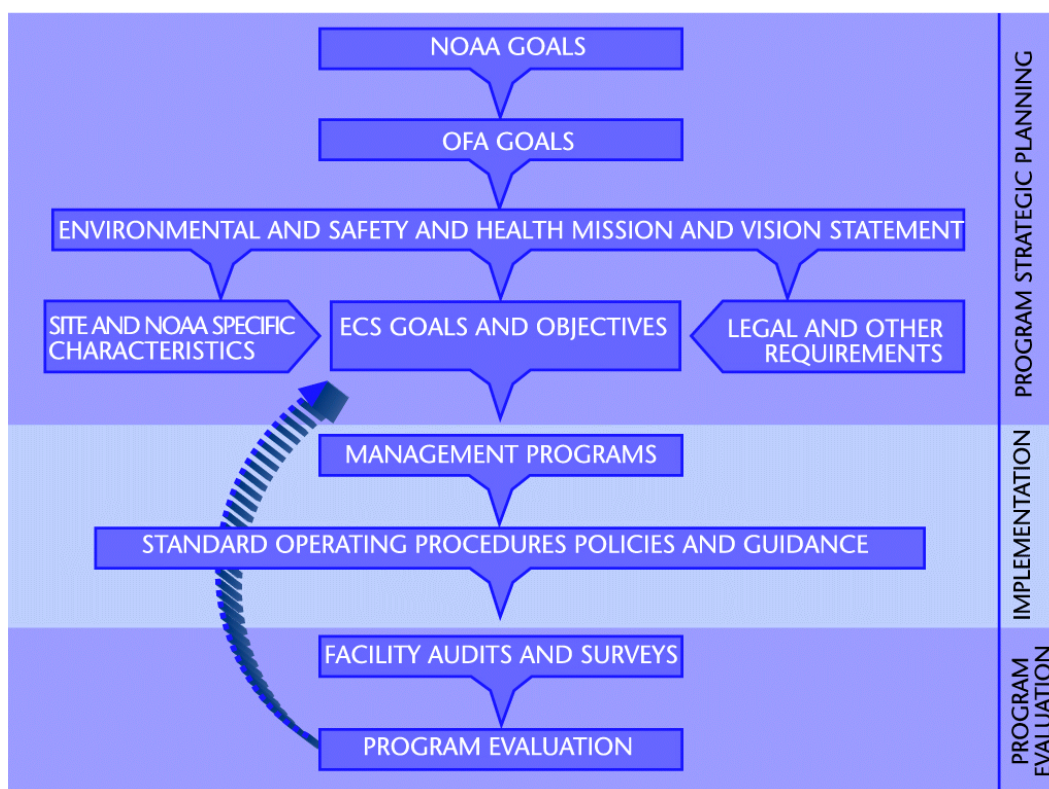
**Goal 2, Achieve Full Compliance and Manage Risk:** Concerns activities undertaken to ensure environmental and safety and health compliance at NOAA facilities and includes best management practices to manage any potential environmental and safety and health risk. In addition, Goal 2 emphasizes expansion of NOAA's management of risk and liability associated with environmental and safety and health compliance.

**Goal 3, Sustain Compliance:** Concerns the maintenance of the highest practical level of environmental and safety and health compliance at NOAA facilities and in NOAA operations. Specifically, Goal 3 is future-oriented and is intended to keep NOAA facilities, operations, and employees in compliance with environmental and safety and health standards through the application of proactive management approaches. Such proactive management approaches include implementation of the Code of Environmental Management Principles (CEMP), an environmental management system, and the health management system outlined in the Occupational Safety and Health Administration's Voluntary Protection Program.

An environmental management system is defined (by the International Organization for Standardization [ISO]) as "that part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and

maintaining the environmental policy." That definition easily can be applied to the concept of a safety and health management system, as well. Implementation of environmental and safety and health management systems, with the support of NOAA's line and staff offices, will allow NOAA to comply more efficiently and effectively with federal, state, and local requirements. Figure 3 shows the strategic model of NOAA's environmental and safety and health management systems. Successful environmental and safety and health management systems also support NOAA's efforts to comply with the provisions of GPRA by putting in place a complete process, from setting policy to measuring results.

**Figure 3: Strategic Perspective of NOAA's Environmental and Safety and Health Management System Model**

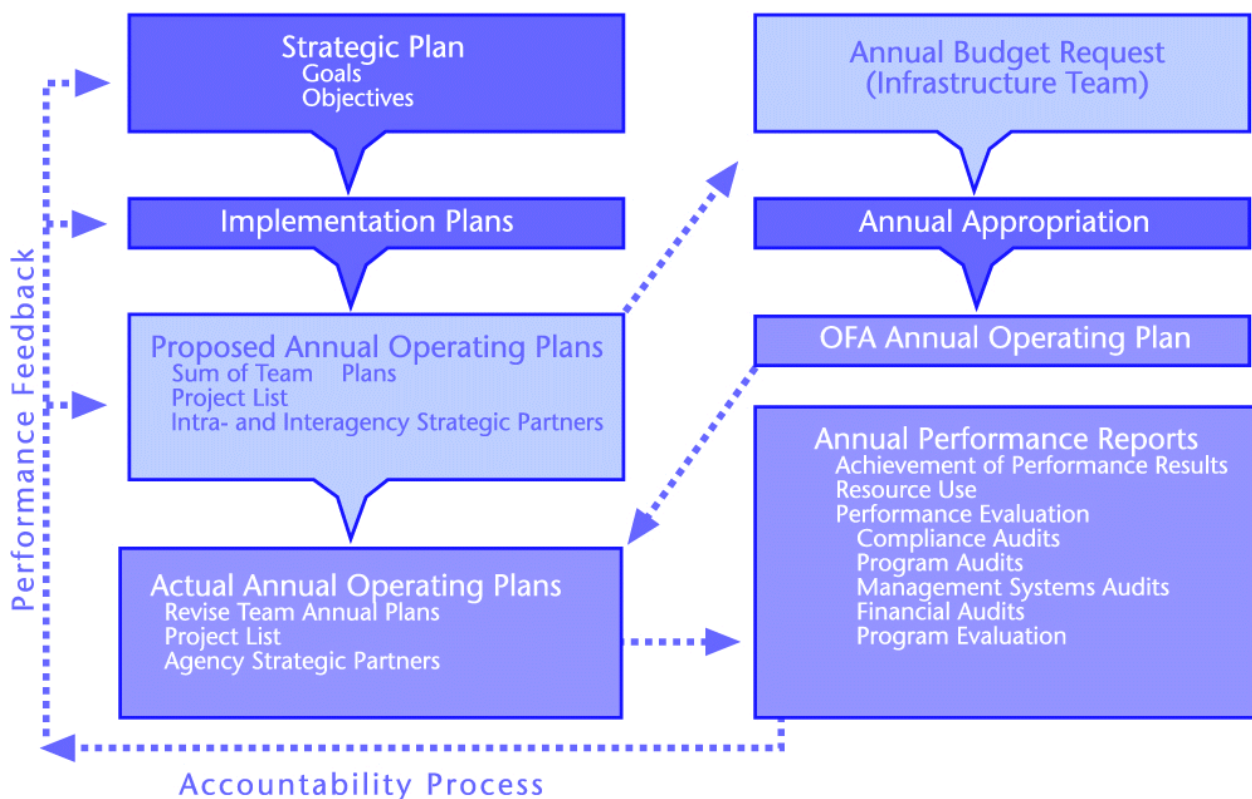


## MEANS OF ACHIEVING GOALS

Figure 4 shows the strategic model for the planning, budgeting, and accountability process of the ECS Division. The process is a continuing cycle of implementation of strategic planning, budgetary actions, and program evaluations. The process is essential in implementing and sustaining the CEMP and safety and health management systems, and it is embodied in Goal 3. The process also is the essential mechanism for the implementation of Goals 1 and 2. The strategic model is a hierarchy of plans that includes the strategic plan (10-year scope), the implementation plan (5-year scope), and the annual operating plan (1-year scope).

The three goals presented in the strategic plan will be achieved through the effective integration of NOAA's human resources, capital resources, and technology resources, accompanied by regular and meaningful program evaluations. Human resources will include "corporate teams" — that is, people in NOAA's ECS network, program and project managers, participants in strategic partnerships, and workplace safety and health committees. Capital and technology resources will be applied to meet these goals. Finally, several sources of information will be used to conduct program evaluations to determine whether any goals or objectives should be revised.

**Figure 4: Strategic Model of the Planning, Budgeting, and Accountability Process for NOAA's ECS Division**





## Human Resources

Human resources include the NOAA ECS Committee, corporate teams, program and project managers, individuals in the NOAA ECS Network, participants in strategic partnerships, and workplace safety and health committees.

### ECS Committee

An important outcome of a recent strategic planning exercise was the creation of the NOAA ECS Committee. The membership of the committee represents all the facets of the agency, including the line and staff offices, the RECOs, and Regional Safety Managers (RSM). The committee was established to serve as a guiding body for the creation of ECS policy and as a forum for the discussion of issues that have the potential to affect the entire agency. The committee also serves as a forum through which the corporate teams report progress toward meeting the objectives set forth in this plan.

### Corporate Teams

One important strategy of the NOAA ECS Division is to accomplish the three goals by creating five NOAA ECS corporate teams; that strategy is referred to as "3 Goals - 5 Teams." Each team is responsible for a major business element of the NOAA ECS Division. The business element teams are: the Assessment Team, the Project Team, the Training Program Team, the Policy Team, and the Information Technology and Communications Team. Table 3 provides some examples of how the efforts of the teams are related to achievement of the three goals.

Sustainable, integrated management systems, built by the corporate teams and monitored by the ECS Committee, will allow NOAA to ensure environmental and safety and health requirements. All teams will consider the following five guiding principles of sustainability (modified from Angela Park of The Catalyst Company):

- Ⓒ **Integration:** Take the systems approach to solving problems and making decisions
- Ⓒ **Anticipation:** Think long-term and be proactive, because "time" does matter; failure to anticipate can be costly in terms of money and human resources
- Ⓒ **Participation:** Involve stakeholders; promote teams, partnerships, and joint ventures; and build alliances as processes that achieve meaningful outcomes
- Ⓒ **Efficiency:** Use resources more wisely; pollution prevention and energy conservation are better than end-of-pipe "fixes"
- Ⓒ **Equity:** Move away from purely technical solutions to solutions that incorporate considerations that are important to stakeholders.

**TABLE 3**  
**"3 GOALS - 5 TEAMS"**  
**EXAMPLES OF ACHIEVING GOALS THROUGH TEAMS**

TEAM	GOAL 1: RESTORE PROPERTIES	GOAL 2: ACHIEVE FULL COMPLIANCE AND MANAGE RISK	GOAL 3: SUSTAIN COMPLIANCE
<b>Assessment Team</b>	Develop business methods and procedure for CARE, assessments of NOAA property, and investigation of incidents and injuries	Develop business methods and procedure for: C Integrated compliance audits at NOAA facilities C Quarterly program reviews	Develop business methods and procedure for: C Integrated management systems audits at the program level and at facilities C Annual program performance report
<b>Project Team</b>	Develop business methods and procedure for recording past and current hazardous materials activities at a facility, as well as incident and injury information for use in root cause analyses  Develop method to rank projects and set priorities among them	Develop business methods and procedure for: C Identifying capital asset projects C Identifying day-to-day project needs	Develop business methods and procedure for: C Identifying pollution prevention solutions C Managing day-to-day activities related to hazardous materials C Ensuring risk communication  C Conducting hazard prevention and control
<b>Training Program Team</b>	Identify curriculum and select method of training for: C Restoration and closure C Property transfers C Root cause analyses	Identify curriculum and select method of training for:  • Hazardous materials • Waste management • Safety and health	Identify curriculum and select method of training for:  C Environmental and safety and health awareness C Integrated management systems
<b>Policy Team</b>	Find and review all of the past ECS policies; identify policies needed	Create policies to update old policies and to fill program needs; properly use data to compare to other programs  Digitize policies and reporting methods	Create a regular policy review cycle
<b>Information Technology and Communication Team</b>	Develop business methods and procedure for recording restoration liabilities, projects, and incident and injury information communication	Develop business methods and procedure for recording regulatory compliance projects  Ensure system integration	Develop business methods and procedure for program management needs (budget, financial, personnel, documentation, and regulatory record keeping)

The five teams are composed of multi-disciplinary professionals, drawn from cross-functional organizations throughout NOAA, such as environmental compliance, safety, contracting, finance, construction, and information technology operations. The team members represent the line and staff office stakeholders. NOAA's ECS Division staff, SECOs, and contractors will supplement the teams. Each team will have a specific charter that details the nature and extent of the program, budget constraints, and accountability for accomplishing objectives and multiyear outcomes associated with the program's three goals. Each team will meet as necessary to develop a multiyear plan of action and milestones and an annual plan of action and milestones.

## Program and Project Managers

The NOAA ECS Division will emphasize the development and maintenance of strong program and project managers, a traditional strategy that relies on such managers to implement goals through technical experts who manage program business elements or projects. The technical experts in NOAA's ECS Division are the SECOs, RECOs, and the headquarters environmental and safety and health compliance staff.

## Individuals in the NOAA ECS Network

The NOAA ECS Division created a corporate network of NOAA employees that cuts across organizational boundaries to increase efficiency, reduce cost, and create synergy. The NOAA ECS Network has three key components (see Figure 5): (1) NOAA line and staff office employees; (2) NOAA ECS corporate teams, and (3) NOAA ECS program and project managers who are experts and professionals. This network will convert NOAA's large organizational structure into a "small world" by facilitating channels of open communication by linking people at NOAA environmental and safety and health conferences and training sessions, through NOAA's intranet, and through the NOAA ECS Division's web site.

Figure 5: NOAA ECS Network

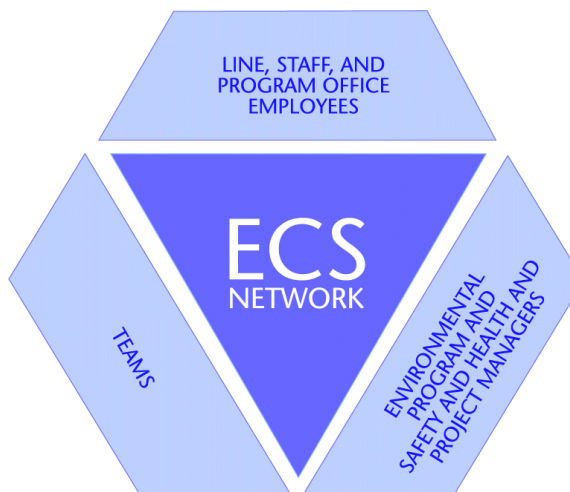
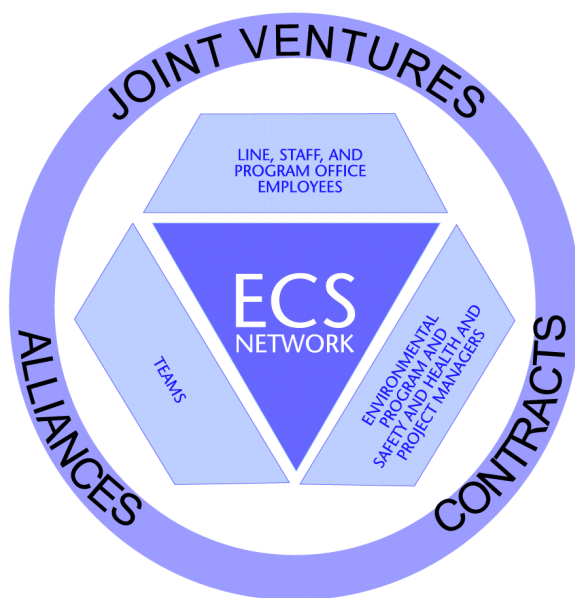


Figure 6: NOAA ECS Network and Strategic Partners



## Participants in Strategic Partnerships

Strategic partnership arrangements will be employed to achieve program goals. Such arrangements include external alliances, joint ventures, and contracts. These arrangements enable NOAA to leverage resources with organizations external to NOAA and to augment NOAA's ECS Network (see Figure 6). Such partnerships are expected to produce training documents and policy guidelines, identify best management practices, and even provide temporarily assigned technical experts.

## Workplace Safety and Health Committees

A key to a successful safety and health program is a partnership between management and employees. Such a partnership can be established through the development of workplace safety and health committees composed of representatives of both groups. The committees will work to build sustainable, integrated safety and health management systems at the workplace, thereby allowing NOAA to ensure compliance with occupational safety and health requirements. Table 4 presents the NOAA committees and their respective missions and charters.

TABLE 4 WORKPLACE SAFETY AND HEALTH COMMITTEES	
COMMITTEE	MISSION AND CHARTER

## Capital Resources

NOAA ECS Division goals are aligned with policies set forth in the Office of Management and Budget's (OMB) Circular A-11, Preparation and Submission of Budget Estimates, July 1998. Specifically the division's goals and OMB's policies are aligned as follows:

- C Goal 1, Restore Properties: Aligns with OMB's policies on incorporating costs for "remedial environmental projects" [section 12.5 (t)] and "environmental restoration" [section 300.4 (a)].
- C Goal 2, Achieve Full Compliance and Manage Risk: Aligns with OMB's policies on incorporating costs for "compliance and ... for pollution control" [section 12.4 (f)] and for "pollution control standards compliance" [section 12.5 (d)(1)]. It also aligns with OMB's policies on incorporating costs for "safe workplaces" [section 12.5 (d)(2)], which is listed under "Design and Construction of Federal Facilities." Last, it aligns with OMB's policies on incorporating costs incurred under the provisions of the "Federal Employee Compensation Act" [section 12.5 (h)], which includes costs for workers' compensation.
- C Goal 3, Sustain Compliance: Aligns with OMB's policies on costs for improving management systems [section 12.3 (g)] and for mixed financial management systems (sections 15.4, 40, and 42).

Table 5 provides insight into future capital resource needs by presenting historical information, future major activities and trends, and accessible information sources.



**TABLE 5**  
**INDICATORS OF FUTURE CAPITAL RESOURCE NEEDS**  
**AND INFORMATION SOURCES**

INDICATORS AND INFORMATION SOURCES	GOAL 1: RESTORE PROPERTIES	GOAL 2: ACHIEVE FULL COMPLIANCE AND MANAGE RISK	GOAL 3: SUSTAIN COMPLIANCE	REMARKS
<b>Annual Budget</b> Before 1995	Approximately \$1.5 million	Approximately \$0.4 million	Approximately \$0.1 million	Budget limited to approximately \$2.0 million
<b>Annual Budget</b> Fiscal Year 1998	\$2.0 Million	\$1.7 million	\$0.3 million	Separate budget for Pribilof Islands, Alaska
<b>Project Trend</b> Before 1996	Restore Pribilof Islands, Alaska	Remove several underground tanks	Conduct fewer than 10 facility compliance audits	Washington state compliance agreement
<b>Projects</b> Fiscal Year 1998	Restore Pribilof Islands, Alaska	Remove several underground tanks	Conduct more than 18 facility compliance audits	Tank removal projects finished
<b>Project Trend</b> Future (+3 years)	Restore closed National Marine Fisheries Service (NMFS) and National Weather Service (NWS) facilities; clean decommissioned ships	Several pollution prevention projects; remove several ozone depleting chemical systems	Conduct more than 18 facility compliance audits; buy and operate mixed financial systems	More management systems needs (GPRA, CFO Act); closing facilities
<b>Information Sources</b> for unfulfilled capital resources needs	Report unfunded restorations in NOAA annual financial statements	Report NOAA projects in EPA's "FedPlan" database	In future, report in: annual program performance reports and program evaluations	Information is more accessible to others, including the public

## Technology Resources

The NOAA ECS Division is undergoing a major change in its technology requirements. In the past, the division depended on acquiring capital assets associated with pollution control technology and restoration technology. In the future, the division will depend on acquiring capital assets associated with pollution prevention approaches and management systems, including information technology hardware. In simple terms, the division is moving away from projects that involve major construction and equipment to services for consulting on pollution prevention approaches, for implementing management systems, and for ensuring compliance with environmental and safety and health requirements. That change is consistent with the change in the private sector, where it's moving away from providing "goods" and toward providing "services." Table 6 shows the change in environmental and safety and health compliance.

**TABLE 6**  
**CHANGES IN ENVIRONMENTAL AND SAFETY AND HEALTH COMPLIANCE**  
**FROM "GOODS" TO "SERVICES"**

TYPE OF PRODUCT	GOAL 1: RESTORE PROPERTIES (Past)	GOAL 2: ACHIEVE FULL COMPLIANCE AND MANAGE RISK (Present)	GOAL 3: SUSTAIN COMPLIANCE (Future)	REMARKS
"GOODS"	Clean land, free of contamination	Pollution control facilities and pollution control equipment	—	Old way; dependant on constructing facilities and purchasing equipment
"SERVICES"	—	Design that allows control or elimination of sources of pollution and contamination	Provision of information for problem solving and decision making to avoid environmental problems	New way; dependant on awareness and knowledge and information technology management

The change is being fostered by EPA and Congress. EPA is emphasizing pollution prevention for federal facilities through the CEMP and guidance documents (for example, *Federal Facility Pollution Prevention Planning Guide*, EPA-300-B-94-013, December 1994, and *Pollution Prevention in the Federal Government: Guide for Developing Pollution Prevention Strategies for Executive Order 12856 and Beyond*, EPA 300-B-94-007, April 1994). Congress has enacted several statutes that form a framework of management systems (for example, GPRA, the Government Management Reform Act of 1994, and the Information Technology Management Reform Act of 1996). Such actions by EPA and Congress require that NOAA's ECS Division make new and different technology investments.

Pollution prevention approaches incorporate a wide scope of technologies and technology-related items. Pollution prevention approaches yield sustainable benefits, such as increased efficiency in the use of energy and water to improve environmental performance at NOAA facilities. The development and implementation of pollution prevention approaches requires that technical and professional experts assess the application of technologies and related items to specific facilities and evaluate the potential benefits of competing approaches through the use of life cycle analysis and total cost assessment techniques.

Management systems also incorporate a wide scope of technologies and technology-related items. Management systems require technologies that support information management, communication, and documentation. Specifically, such technologies include computer software and hardware, along with technical and professional experts to develop and maintain databases, software, and hardware.

## Program Evaluation

GPRA requires that periodic program evaluations be conducted and that the results be used in revising strategic goals and objectives, as needed. Program evaluation, as defined by the General Accounting Office (GAO), is "the application of scientific research to assess

program concepts, implementation, and effectiveness" (from page 88 of GAO's *Designing Evaluations* [May 1991]). Specifically, program evaluation will be necessary to determine how successful the NOAA ECS Division is in meeting its three strategic goals.

Conducting program evaluations will require information. Several sources of information currently exist at NOAA, such as the facility environmental compliance audits, facility condition surveys, and safety and health assessments associated with Goal 2. It will be necessary, however, to initiate the collection of other information, such as CARE assessments associated with Goal 1, the environmental management system audits associated with Goal 3, and the Occupational Safety and Health Administration's Voluntary Protection Program protocol for the evaluation of workplaces. Table 7 presents some typical information sources appropriate to the NOAA ECS Division and the characteristics of those sources.

Because GPRA requires that the strategic plan be updated and revised every three years, it is appropriate that the periodic program evaluations be conducted the year before the strategic plan is updated and revised. The information obtained through the program evaluation then can be incorporated into the updated and revised plan.

**TABLE 7**  
**NOAA ECS DIVISION - PROGRAM EVALUATION**  
**INFORMATION SOURCES AND THEIR CHARACTERISTICS**

(modified from M. D. LaGrega, P. L. Buckingham, J. C. Evans (1994) *Hazardous Waste Management*)

SOURCE OF INFORMATION ( and type document)	CHARACTERISTICS						
	OBJECTIVITY	AUDITING EXPERTISE	POLLUTION CONTROL EXPERTISE	ENVIRONMENTAL REGULATORY EXPERTISE	INSTITUTIONAL MEMORY	FAMILIARITY WITH OPERATIONS	PARTICIPATION IN SOLUTION
<b>REGULATORY AGENCY</b> 1. EPA's quarterly environmental compliance status reports 2. EPA, State and local inspection reports and enforcement actions 3. EPA conducted environmental management reviews 4. OSHA inspections 5. NRC inspections 6. Voluntary protection program audit	Very high	High	Excellent but usually specialized	Excellent but usually specialized	None	Low	Indirect
<b>CONTRACTOR</b> 1. Compliance audits (phase 1) 2. Specific program audits (phase 2) 3. Environmental management systems audits (phase 3) 4. Organization development studies 5. Safety and health management systems	High	High	Excellent usually broad	Excellent usually broad	None	Low	Nominal
<b>CONGRESS</b> General Accounting Office audits	Very high	High	None	Almost none	None	None	None
<b>INDEPENDENT INTERNAL</b> 1. NOAA annual financial audits 2. Inspector General audits 3. Office of General Counsel's reports	Very high	High	None	Almost none	None	None	None
<b>PROGRAM</b> 1. Compliance audits (phase 1) 2. Specific program audits (phase 2) 3. Environmental management systems audits (phase 3) 4. CARE property assessments 5. Organization development studies 6. Safety and health management system audits 7. Incident investigations	Questionable	Nominal	Varies	Good usually broad	Corporate memory	High	High and direct

# **Appendix A**

## **Bibliography**

# BIBLIOGRAPHY

Anreeva, N. 1998. "Do the math: It's a small world." *Business Week*. August 17 (at pages 54-55).

Bolman, Lee G. and Terrence E. Deal. 1997. Reframing Organizations: Artistry, Choice, and Leadership. Jossey-Bass Publishers, San Francisco, CA.

Collins, J.J. and Chow, C.C. 1998. "It's a small world." *Nature*. June 4 (at pages 409-410).

Department of Commerce (DOC). 1997. "Department of Commerce Strategic Plan for 1997-2002". September.

<http://www.doc.gov/bmi/BUDGET/strtgcs/strtone.htm>

Department of Commerce Environmental Management. 1997. "Framework-3." (Includes DOC Administrative Order 216-17 and NOAA Administrative Order 216-17.)

<http://www.masc.noaa.gov/ecims/tablecon.html>

Environmental Protection Agency (EPA). 1997, 1995. "Environmental Audit Program Design Guidelines for Federal Agencies". Federal Facilities Enforcement Office.

EPA. 1997. "Implementation Guide for the Code of Environmental Management Principles for Federal Agencies (CEMP)". Office of Enforcement and Compliance Assurance. EPA315-B-97-001. March.

EPA. 1996. "Generic Protocol for Conducting Environmental Audits of Federal Facilities". Office of Enforcement and Compliance Assistance. EPA 300-B-96-012A\B. December.

<http://es.epa.gov/oeca/fedfac/complian/complete.pdf>

EPA 1994. "Federal Facility Pollution Prevention Planning Guide". December.

EPA. 1994. "Pollution Prevention in the Federal Government: Guide for Developing Pollution Prevention Strategies". April.

GAO. 1998. "Managing for Results: The Statutory Framework for Performance-Based Management Accountability". January.

GAO. 1991. "Designing Evaluations". May.

National Oceanic and Atmospheric Administration (NOAA). 1996. "1995-2005 NOAA Strategic Plan". May.

<http://www.noaa.gov/str-plan/toc.htm>

NOAA, Environmental Compliance Staff. 1996. "Environmental Awareness Video".

NOAA, Office of Finance and Administration. "Program Strategic Plan".



Office of Management and Budget (OMB). 1997. "Preparation and Submission of Budget Estimates." Circular A-11, revised. June 23.

<http://www.whitehouse.gov/WH/EOP/OMB/html/circulars/a011>

OMB. 1998. "Preparation and Submission of Strategic Plans and Annual Performance Plans." Circular A-11, Part 2. July 1.

Office of the President of the United States. 1978. Executive Order 12088. "Federal Compliance with Pollution Control Standards". October 13.

Park, Angela. 1998. "Environmental Sustainability Overview," Personal Communications. The Catalyst Company. (202-333-4234).

Peterson, I. 1998. "Close connections: It's a small world of crickets, nerve cells, computers, and people." *Science News*. August 22 (at pages 124-126).

U.S. Congress. *Chief Financial Officers Act of 1990*.

<http://www.npr.gov/library/misc.cfo.html>

U.S. Congress. *Clean Air Act of 1955*.

U.S. Congress. *Clean Water Act of 1977*.

U.S. Congress. *Community Environmental Response Facilitation Act (CERFA)*.

U.S. Congress. *Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)*.

U.S. Congress. *Government Management Reform Act of 1994*.

[gopher://pula.financenet.gov:70/00/docs/legis/s-2170.msg.gop](http://pula.financenet.gov:70/00/docs/legis/s-2170.msg.gop)

U.S. Congress. *The Government Performance and Results Act of 1993*.

<http://npr.gov/library/misc/s20.html>

U.S. Congress. *Information Technology Management Reform Act of 1996*.

[http://www.itpolicy.gsa.gov/mks/regs-leg/s1124\\_en.htm](http://www.itpolicy.gsa.gov/mks/regs-leg/s1124_en.htm)

U.S. Congress. *National Environmental Policy Act of 1969*.

U.S. Congress. *Resource Conservation and Recovery Act of 1976*.

Watts, D.J. and Strogatz, S.H. 1998. "Collective dynamics of 'small-world networks.'" *Nature*. June 4 (at pages 440-442).

# **Appendix B**

## **Glossary**

## GLOSSARY

**CERCLIS** — The CERCLA Information System is an Environmental Protection Agency (EPA) database that provides information about Superfund sites on the NPL. Data for Enforcement Analysis (IDEA) contains a subset of CERCLIS data related to compliance status.

**Customer** — A person or organization to whom an agency provides a product or service; customers can be either internal or external to the agency.

**Employer (e.g., Management Official)** — A supervisor or management official as defined in the applicable labor-management relations program covering the effected employees.

**Employee** — Any person, other than members of the NOAA Corps and Armed Forces, employed or otherwise suffered, permitted, or required to work for and by NOAA.

**Environmental Legal Liabilities** — Conditions at a facility that are causing that facility to be in violation of environmental statutes and/or regulations. Such violations include historical legal liabilities (defined below).

**Environmental Management Review** — An audit of a government facility conducted by EPA on a voluntary basis as a means of assisting the facility in improving its environmental management system.

**Environmental Management System** — A comprehensive management system tailored to the environmental activities of an organization.

**General goal** — A general goal is an elaboration of the mission statement, developing with greater specificity how an agency will carry out its mission. The goal may be of a programmatic, policy, or management nature and is expressed in a manner that allows a assessment to be made in the future of whether the goal was or is being achieved.  
*Source: Office of Management and Budget (OMB), Circular A-11, Sec. 200.2, p. 271.*

**Hazard** — A workplace condition that might result in injury, health impairment, illness, disease, or death to any employee who is exposed to the condition, or damage or loss to property, equipment, resource, or the environment.

**Historical Legal Liabilities** — Those environmental legal liabilities that are associated with contaminated media caused by practices that were conducted prior to 1980.

**IDEA** — The Integrated Data for Enforcement Analysis (IDEA) database contains data from 15 EPA and EPA-related databases, including: RCRIS, CERCLIS, SETS, AND ERNS.

**Illness (Occupational)** — Any abnormal condition or disorder of the body (other than injury induced) caused by exposure to conditions associated with the occupational environment.

**Injury** — Traumatic bodily harm, such as a cut, fracture, burn, or poisoning, caused by single or one-day exposure to an external force, toxic substance, or physical agent.

**Mission statement** — A mission statement presents clear picture of an organization's purpose and the reason for its existence. It identifies the nature and scope of present operations and describes the values and priorities of the organization.

**Outcome goal** — An outcome goal is a description of the intended result, effect, or consequences that will take place because a program or activity is carried out.

*Source: OMB, Circular A-11, Sec. 200.2, p. 271.*

**Outcome measure** — An outcome measure assessment of the results of a program activity, compared with its intended purpose.

*Source: GPRA, Sec. 1115.*

**Output goal** — An output goal is a description of the level of activity or effort that will be produced or provided over a period of time or by a specified date, including a description of the characteristics and attributes established as standards in the course of conducting the activity or effort.

*Source: OMB, Circular A-11, Sec. 200.2, p. 271.*

**Output measure** — An output measure is the result of the tabulation, calculation, or recording of activity or effort and can be expressed in a quantitative or qualitative manner.

*Source: GPRA, Sec. 1115.*

**Performance goal** — A performance goal is a target level of performance expressed as a tangible, measurable objective, against which actual achievement can be compared, including a goal expressed as a quantitative standard, value, or rate.

*Source: OMB, Circular A-11, Sec. 200.2, p. 271.*

**Performance indicator** — A performance indicator is a particular value or characteristic used to measure output or outcome.

*Source: OMB, Circular A-11, Sec. 200.2, p. 271.*

**Phase 1 Environmental Audits** — A review of facility conditions in regard to specific media areas (e.g., air, water, and solid and hazardous wastes) with a focus on compliance with federal environmental requirements.

**Phase 2 Environmental Audits** — A review of specific environmental programs (such as management of the water program) with attention to cross-cutting issues and approaches such as pollution prevention and seven other organizational disciplines that help foster success in the technical management areas outlined in Phase 1 audits.

**Phase 3 Environmental Audits** — An examination of all management of all environmental programs at a facility and the parent agency to help establish compliance as a starting point rather than the goal of environmental performance.

**Program activity** — A program activity is a specific activity or project as listed in the program and financing schedules of the annual budget of the United States Government.

*Source: GPRA, Sec. 1115.*

**Program evaluation** — A program evaluation is an assessment, through objective measurement.

**Risk** — The measure of the probability and severity of the hazard(s) or adverse effects in terms of human, facility, and environmental damage or degradation.

**Risk Management** — An uncontaminated assessment of the risks associated with an action or activity and the potential mitigation measures to minimize the level of risk. (Commonly distinguished from risk assessment, even though the term can be used to describe the entire process of risk assessment and management.)

**Workplace or Worksite** — A physical location where NOAA work or operations are performed.

**Work Conditions and/or Environment** — The physical location; equipment or materials processed or used; and the kinds of operations performed by an employee in the performance of his/her work, whether on or off the NOAA premises.